Chapter 296-824 WAC

EMERGENCY RESPONSE

NEW SECTION

WAC 296-824-100 Scope. *What is the purpose of chapter 296-824 WAC, Emergency response to hazardous substance releases?*

To state the minimum requirements that help you protect the safety and health of your employees during a response to a *hazardous substance releases* in your *workplace* or any other location.

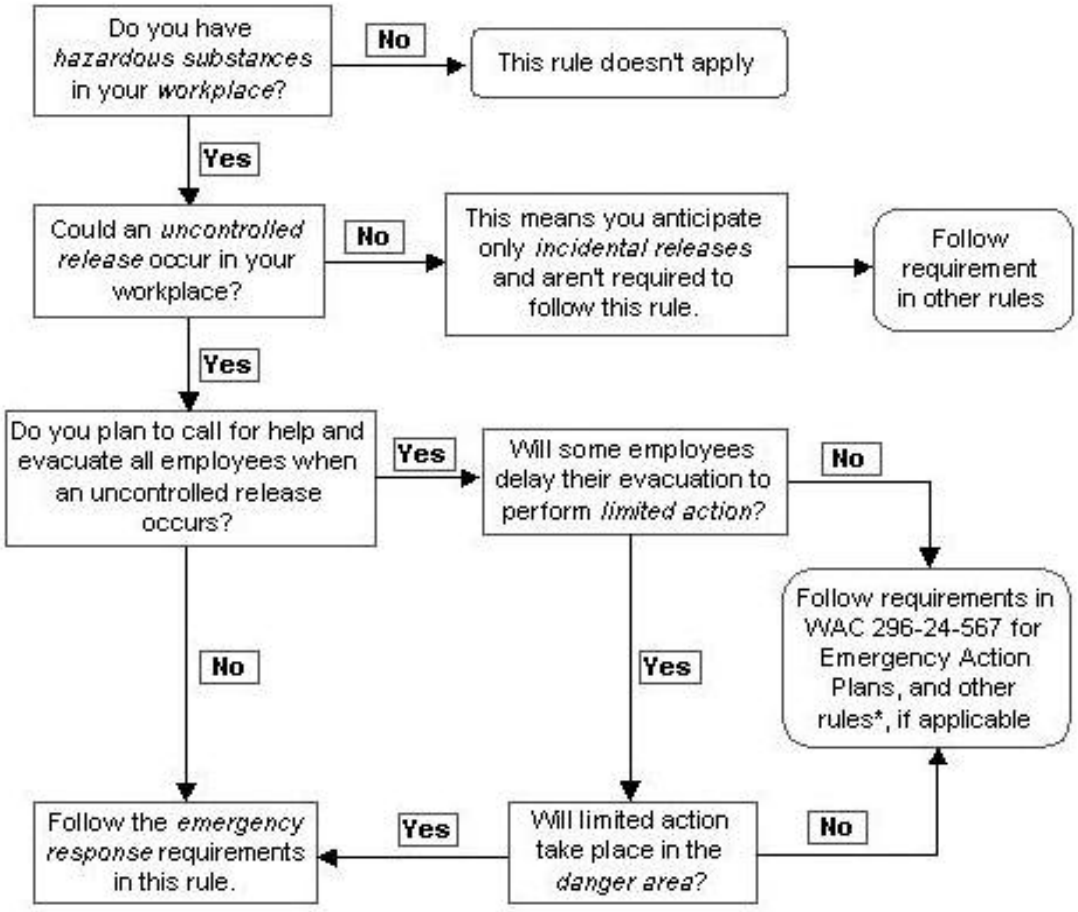
Does this chapter apply to your workplace?

This chapter applies if your employees are, or could become, involved in responding to uncontrolled releases of hazardous substances in your workplace or any other location. Use the scope flow chart, and definitions that follow, to determine if this chapter applies to your workplace(s). Defined words are italicized in the flow chart.

EXEMPTION: This chapter does not apply to you if your workplace is a hazardous waste site. If you are not sure about your site classification, see chapter 296-62 WAC, Part P, Hazardous waste operations and treatment, storage, and disposal facilities.

If your workplace is a treatment, storage, and disposal site this chapter may apply.

824 Flowchart



*The flow chart references other chapters applicable to your workplace depending on conditions and hazards. Examples include:

WAC 296-800-140, Accident prevention program
WAC 296-800-160, Personal protective equipment (PPE)
WAC 296-800-170, Employer chemical hazard communication
WAC 296-62-400, Hazardous chemicals in laboratories
WAC 296-62-071, Respiratory protection
WAC 296-24-567, Employee emergency plans and fire prevention plans

Definitions applicable to the flow chart. (See WAC 296-824-15010 for additional definitions used in the chapter):

Danger area

Areas where conditions pose a serious danger to employees, such as areas where:

Immediately dangerous to life or health (IDLH) conditions could exist

OR

High levels of exposure to toxic substances could exist

OR

There is a potential for exceeding the lower explosive limit (LEL),

also known as the lower flammability limit (LFL), of a substance.

Emergency response

A response to an anticipated release of a hazardous substance that is, or could become, an *uncontrolled release*.

Hazardous substance

Any biological, radiological, or chemical substance that can have adverse effects on humans. (See WAC 296-824-15010 for a more specific definition.)

Immediately dangerous to life or health (IDLH)

Any atmospheric condition that would:

Cause an immediate threat to life
Cause permanent or delayed adverse health effects
Interfere with an employee's ability to escape

Incidental release

A release that can be safely controlled at the time of the release and does not have the potential to become an *uncontrolled release*.

Example of a situation that results in an incidental release:

A tanker truck is receiving a load of hazardous liquid when a leak occurs. The driver knows the only hazard from the liquid is minor skin irritation. The employer has trained the driver on procedures and provided equipment to use for a release of this quantity. The driver puts on skin protection and stops the leak. A spill kit is used to contain, absorb, and pick up the spilled material for disposal.

Limited action

Action necessary to:

Secure an operation during emergency responses,

OR

Prevent an incident from increasing in severity.

Examples include shutting down processes and closing emergency valves.

Release

A spill, leak, or other type of hazardous substance discharge.

Uncontrolled release

A release where significant safety and health risks could be created. Releases of hazardous substances that are either incidental or could not create a safety or health hazard (i.e., fire, explosion or chemical exposure) are not considered to be uncontrolled releases.

Examples of conditions that could create a significant safety and health risk:

Large-quantity releases
Small-releases that could be highly toxic
Potentially contaminated individuals arriving at hospitals
Airborne exposures that could exceed a WISHA permissible exposure limit or a published exposure limit and employees are not adequately trained or equipped to control the release.

Example of an uncontrolled release:

A forklift driver knocks over a container of a solvent-based liquid, releasing the contents onto the warehouse floor. The driver has been trained to recognize the vapor is flammable and moderately toxic when inhaled. The driver has not been trained or provided appropriate equipment to address this type of spill. In this situation, it is not safe for the driver to attempt a response. The driver needs to notify someone of the release so an emergency response can be initiated.

Workplace

A fixed facility

OR

A temporary location (such as a traffic corridor)

OR

Locations where employees respond to emergencies.

NEW SECTION

WAC 296-824-110 Summary.

Your responsibility:

To anticipate, plan for, and manage emergency response operations so employees are protected from hazardous substances and conditions.

Note: Other chapters may apply to your workplace, such as:
Chapter 296-800 WAC, Safety and health core rules
Chapter 296-62 WAC, General occupational health standards
Chapter 296-24 WAC, General safety and health standards
Chapter 296-155 WAC, Safety standards for construction work

You will find some safety and health requirements (for example, personal protective equipment) are addressed on a general level in the core rules, while being addressed for a specific application in this rule. When this happens, both requirements apply and should not conflict.

If you are uncertain which requirements to follow, you must comply with the more protective requirement. Contact your local L&I office if you need assistance in making this determination.

You must:

Planning

Develop an emergency response plan

WAC 296-824-11010

Training

Train your employees

WAC 296-824-11020

Medical surveillance

Provide medical surveillance to employees

WAC 296-824-11050

Keep records

WAC 296-824-11060

Incident requirements

Recognize emergencies and initiate a response

WAC 296-824-12010

Implement and maintain an incident command system

WAC 296-824-12020

Prepare skilled support personnel

WAC 296-824-12030

Make sure the incident commander oversees activities during the response

WAC 296-824-12040

Use the buddy system in danger areas

WAC 296-824-12050

Provide rescue and medical assistance

WAC 296-824-12060

Personal protective equipment (PPE)

Use appropriate PPE

WAC 296-824-13010

Control hazards created by PPE

WAC 296-824-13020
Use PPE properly
WAC 296-824-13030
Postemergency response
WAC 296-824-14010
Definitions
WAC 296-824-15010.

NEW SECTION

WAC 296-824-11010 Planning. Develop an emergency response plan.

Note: You may already have an emergency response plan, such as required by chapter 296-62 WAC, Part P, Hazardous waste operations and treatment, storage and disposal facilities or by state and locally coordinated response efforts (Section 303 of Superfund Amendments and Reauthorization Act (SARA), Title III). You may use those plans to comply with this section, if they include the items listed below.

Before a written emergency response plan can be developed, you will need to anticipate the types of uncontrolled releases that employees could encounter in your workplace(s).

You must:

(1) Make sure your plan is written and adequately addresses, as a minimum, all of the following:

Preemergency planning and coordination with additional responders (including personnel from other employers such as: Fire departments, law enforcement agencies, emergency medical services, and state or federal agencies).

Personnel roles, (See Table 1) and lines of authority and communications for all affected parties including responders

Employee training (see WAC 296-824-11020 for more detail):

Note: Responders' level of training depends on the duties or roles the employer assigns.

Training for the employees' role should address the competencies specified in Tables 3 through 6.

Training on specific substances may be appropriate depending on the number and characteristics of hazardous substances expected to be encountered. For example, if employees may only respond to one substance, you could provide training (covering the knowledge and skills specified in Tables 3 through 6) on that single substance. If employees might respond to a range of hazardous substances, training may be required to cover categories of hazardous substances.

Videos and automated training methods (for example: Interactive computer-based programs) may be used in training; however, instructors must be readily available to:

– Encourage and provide responses to questions for the benefit of the group.
– Evaluate employee understanding of the material.
– Provide other instructional interaction to the group.

Emergency recognition

Immediate emergency procedures including:

– Methods of alerting employees (see WAC 296-800-310, exit routes and employee alarm systems) and outside responders

– Procedures for limited action (emergency prevention)

Note: ***Limited action*** includes shutting down processes, closing emergency valves and other critical actions to secure the operation, or prevent the incident from increasing in severity.

Limited Action and Employee Roles	
If . . .	**Then employees involved would be:**
Limited action could be conducted in the danger area	Considered emergency responders
Limited action will not be conducted in the danger area	Considered evacuees, not emergency responders

– Details of who will evacuate immediately and who will remain behind

for limited action

– Evacuation routes and procedures

– How to establish safe distances and places of refuge (for example, during emergency response the incident commander (IC) decides to make changes based on new developments, i.e., changes in the wind direction).

Methods of securing and controlling access to the site

Emergency medical treatment and first aid

A complete personal protective equipment (PPE) program that addresses:

– Selection of PPE including selection criteria to be used and the identification, specified use and limitations of the PPE selected.

– Training on proper use of PPE (including maintenance). – Hazards created by wearing PPE including heat stress during temperature extremes, and/or other appropriate medical considerations.

– Criteria used for determining the proper fit of PPE.

– Procedures covering proper use of PPE including procedures for inspection, putting it on (donning) and removing it (doffing).

– Maintenance of PPE including procedures for decontamination, disposal and storage.

– Methods used to evaluate the effectiveness of your PPE program.

Note: If a manufacturer's printed information or WISHA rule adequately addresses procedural requirements (such as donning or doffing for PPE), it is not necessary to rewrite this into your program; simply attach the printed information.

You may use written procedures provided by the equipment manufacturer when they meet the requirements of other chapters, including chapter 296-62 WAC, Part E, Respiratory protection.

Emergency equipment

Emergency response procedures

Decontamination procedures determined by a hazardous materials specialist or other qualified individual

Methods to critically assess the response and conduct appropriate follow-up

You must:

(2) Make your written emergency response plan available to employees, their representatives, and WISHA personnel for inspecting or copying.

Note: In situations where multiple employers could respond to an incident, all plans should consistently address:

Who will be designated as the incident commander (IC)

AND

If, when, and how transfer of the incident commander (IC) position will take place.

Table 1
Roles and Duties of Emergency Responders

If the employee's role is:	Then all of the following apply. They:
First responder at the awareness level	Are likely to witness or discover a hazardous substance release Are trained to initiate an emergency response by notifying the proper authorities of the release Take no further action beyond notifying the authorities
First responder at the operations level	Respond to actual or potential releases in order to protect nearby persons, property, and/or the environment from the effects of the release Are trained to respond defensively, without trying to stop the release May try to: - Confine the release from a safe distance - Keep it from spreading - Protect others from hazardous exposures

Hazardous materials technician	Respond to releases or potential releases, with the intent of stopping the release Are trained to approach the point of release offensively in order to, either: - Plug - Patch - Stop the release using other methods
Hazardous materials specialist	Respond along with, and provide support to, hazardous materials technicians Are required to have more specific knowledge of hazardous substances than a hazardous materials technician Act as the site activity liaison when federal, state, local, and other government authorities participate
Incident commander	Have ultimate responsibility for: - Direction - Control - Coordination of the response effort - Will assume control of the incident beyond the first responder awareness level
Specialist employee	Are a technical, medical, environmental, or other type of expert May represent a hazardous substance manufacturer, shipper, or a government agency May be present at the scene or may assist from an off-site location Regularly work with specific hazardous substances Are trained in the hazards of specific substances Are expected to give technical advice or assistance to the incident commander or incident safety officer, when requested
Skilled support personnel	Are needed to perform an immediate, specific emergency support task at the site Are skilled in the operation of equipment including: – Earth moving equipment – Cranes – Hoisting equipment
Incident safety officer	Are designated by the incident commander Are knowledgeable in operations being implemented at the site Have specific responsibility to: – Identify and evaluate hazards – Provide direction on employee safety matters

NEW SECTION

WAC 296-824-11020 Training.

Train your employees

Note: Use Tables 3 through 6 to identify your employees' training competencies.
You may conduct training internally, or use outside training services to comply with this section.
– When outside trainers are hired, you are still responsible for making sure the requirements of this section are met. For example, employers may compare the course outline to the competencies listed in Tables 3, 4 and 5.

You must:

Make sure employees are appropriately trained for their assigned roles and duties as follows:

EXEMPTION: Skilled support employees are not covered by the training requirements in this section. (See WAC 296-824-12030.)

– Initial training:

Provide initial training before the employee is allowed to participate in an actual emergency response operation.

Note: When first responders at the awareness or operations level have sufficient experience to objectively demonstrate competencies specified in Table 3, you may accept experience instead of training.

Make sure initial training adequately addresses the competencies in Tables 3 through 6 and the minimum training durations in Table 2.

Certify that employees objectively demonstrate competencies specified in Tables 3, 4 and 5 (except for employees trained as first responders at the awareness level).

– Retraining (refresher) training:

Provide retraining annually

Make sure retraining covers necessary content

Document training or demonstrated competency

Note: Retraining is not required when employees demonstrate competencies annually and a record is kept of the demonstration methodology used.

– Trainer qualifications:

Verify trainers have satisfactorily completed an instructors' training course for the subjects they teach. For example, courses offered by the United States National Academy, or equivalent courses are acceptable.

OR

Have the educational and instructional experience necessary for training.

– Specialist employees:

Specialist employees who have been sent to the scene to advise or assist must receive training or demonstrate competency in their specialty, annually.

Table 2
Minimum Training Durations for All Responders

If you are a:	Then:
First responder at the awareness level	Training duration needs to be sufficient to provide the required competencies
First responder at the operations level	You need a minimum of 8 hours training (see Table 3)
Hazardous materials technician	You need a minimum of 24 hours training (see Table 4)
Hazardous materials specialist	You need a minimum of 24 hours training (see Table 4)
Incident commander	You need a minimum of 24 hours training (see Table 5)

Table 3
Competencies for First Responders at the Awareness Level and Operations Level

Employees must be able to show they:	When they are designated as First Responders at the:	
	Awareness Level	Operations Level
Understand what hazardous substances are and their associated risks.	X	X
Recognize the presence of hazardous substances in an emergency.	X	X
Can identify the hazardous substances, when possible.	X	X
Understand the potential consequences of hazardous substances in an emergency.	X	X
Understand the role of a first responder at the awareness level as described in: The employer's emergency response plan, including site security and control. The United States Department of Transportation's Emergency Response Guidebook. *(search at: http://www.dot.gov).*	X	X
Can use The United States Department of Transportation's Emergency Response Guidebook.	X	X
Recognize the need for additional resources and the need to notify the incident's communication center accordingly.	X	X
Know basic hazard and risk assessment techniques.		X
Can select and use personal protective equipment (PPE) appropriate for first responder operations level.		X
Understand basic hazardous materials terms.		X
Can perform basic control, containment, and/or confinement operations within the capabilities of the resources and PPE available.		X
Can implement decontamination procedures to their level training.		X
Understand relevant standard operating and termination procedures.		X

Table 4
Competencies for Hazardous Materials Technicians and Hazardous Materials Specialist

Employees must be able to show they:	When they are designated as a Hazardous Materials:	
	Technician	Specialist
Have the competencies specified for the first responder operations level. (See Table 3)	X	X
Can implement an employer's emergency response plan.	X	X
Can function within their assigned role in the incident command system.	X	X
Understand hazard and risk assessment techniques.	X	X
Understand basic chemical and toxicological terminology and behavior.	X	X
Can use field survey instruments and equipment to classify, identify, and verify materials at the incident.	X	X
Can select and use personal protective equipment (PPE) appropriate for hazardous materials technicians.	X	X

Can perform advance control, containment, and/or confinement operations within the capabilities of the resources and PPE available.	X	X
Can implement decontamination procedures to their level of training.	X	X
Understand termination procedures.	X	X
Can implement the local emergency response plan.		X
Know of the state emergency response plan.		X
Can develop a site safety and control plan.		X
Understand chemical, radiological, and toxicological terminology and behavior.		X
Understand in-depth hazard and risk techniques.		X
Can use advanced survey instruments and equipment to classify, identify and verify materials at the incident.		X
Can select and use proper specialized chemical PPE given to hazardous materials specialists.		X
Can perform specialized control, containment, and/or confinement operations within the capabilities of the resources and PPE available.		X
Can determine decontamination procedures.		X

Table 5 **Competencies for Incident Commanders**
Employees designated as Incident Commanders must be able to show they:
Have competencies specified for the First Responder Operations Level. (See Table 3.)
Know of the state emergency response plan and the Federal Regional Response Team.
Can implement the local emergency response plan.
Can implement the employer's emergency response plan.
Have knowledge of the incident command system (ICS) and understand how they relate to it.
Can implement the employer's ICS.
Understand the hazards and risks associated with employees working in chemical protective clothing.
Understand the importance of decontamination procedures.
Note: If the first employee arriving at the scene is not trained as an IC, they may take control of the incident within their designated role and training level.

Table 6 **Competencies for Specialist Employees**
Employees designated as Specialist Employees must be able to show they:
Have current knowledge in their field regarding safety and health practices relating to the specific hazardous substances.
Have the knowledge of the ICS and understand how they relate to it.
Understand the care and use of personal protective equipment (PPE).

NEW SECTION

WAC 296-824-11050 Medical surveillance. Provide medical surveillance to employees.

You must:

(1) Provide medical surveillance for employees to comply with Tables 7 and 8, and the following:

Make medical surveillance available at:

– Reasonable times and places.

– No cost to employees, including travel associated costs such as mileage, gas or bus fare if the employee is required to travel off site

AND

– Wages for additional time spent outside of employees normal work hours.

Make sure a licensed physician performs or supervises exams and procedures.

Give complete information to the examining physician including:

– A copy of this chapter.

– A description of the employee's duties that relate to hazardous substance exposure.

– The hazardous substance exposure levels anticipated for the employee.

– A description of the personal protective equipment (PPE) the employee could use.

– Information available from previous medical examinations.

– The medical evaluation information required by chapter 296-62 WAC, Part E, Respiratory protection.

Medical exams must include, at a minimum:

– A medical history

– A work history (or updated history if on file)

– A special emphasis on:

Assessment of symptoms related to handling hazardous substances

Health hazards

Evaluation of fitness for duty (including the ability to wear any personal protective equipment (PPE) or other conditions that may be expected at the workplace)

– Other content as determined by the examining physician.

Note: The physician should consult the *Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities* and the *Medical Management Guidelines for Acute Chemical Exposure* (search OSHA website: http://www.osha.gov).

(2) Obtain the physician's written opinion and give a copy to the employee that includes:

A statement of whether or not medical conditions were found which would increase the employee's risk for impairment during emergency response work or respirator use.

– Do not include specific findings or diagnoses unrelated to occupational exposures.

Limitations recommended to the employee's assigned work, if any.

Exam and test results if the employee requests this information.

A statement that affirms the employee has been confidentially informed of medical exam results (including medical conditions requiring follow-up).

Table 7 Medical Surveillance for Employee Categories	
If the employee is covered by this chapter and is:	**Then you must:**
Exposed for at least 30 days a year to health hazards or hazardous substances at or above the permissible exposure limit or published exposure levels (even when respirators are used), **OR** Required to wear a respirator for at least 30 days a year.*	Offer standard medical surveillance as specified in Table 8.*
A hazardous materials (HAZMAT) team member A hazardous materials specialist	Provide standard medical surveillance as specified in Table 8.
An emergency responder who shows immediate or delayed signs or symptoms possibly resulting from exposure to hazardous substances during an incident.	Provide incident-specific medical surveillance as specified in Table 8.
Not an emergency responder and: – May be injured – Shows immediate or delayed signs or symptoms possibly resulting from exposure to hazardous substances – May have been exposed to hazardous substances at concentrations above the permissible exposure limits (PELs) or the published exposure levels without appropriate PPE.	Offer incident-specific medical surveillance as specified in Table 8.

***Note:** A medical evaluation for respirator use is required by chapter 296-62 WAC, Part E, Respiratory protection, for those employees who have not been cleared for respirator use during medical surveillance activities.

Table 8 Frequency of Exams and Consultations	
If the employee is covered by:	**Then medical surveillance must include:**
Standard medical surveillance	Exams and consultations: – Before assignment. **Note:** If the employee is a hazardous materials (HAZMAT) team member or a hazardous materials specialist, the employee must receive a baseline physical examination. – At least once every 12 months after their initial assignment unless the physician believes a shorter, or longer interval (but no more than 24 months) is appropriate. – Whenever employees are reassigned to an area where they will no longer be covered by medical surveillance and they have not been examined within the past 6 months. – As soon as possible after an employee reports: Signs or symptoms of possible overexposure to hazardous substances or health hazards Injury Exposure above the permissible exposure limits or published exposure levels – At the termination of their employment unless they were examined within the past 6 months.
Incident-specific medical surveillance	Medical consultations and exams: – As soon as possible following the incident or development of signs or symptoms. – At additional times, if the physician determines follow-up is medically necessary.

NEW SECTION

WAC 296-824-11060 Keep records.

You must:

Keep a record of:

– Name and Social Security number of the employee receiving medical surveillance

– Physicians' written opinions, recommended limitations, and results of examinations and tests

– Any employee medical complaints regarding hazardous substance exposures

– A copy of all information given to the examining physician (except a copy of this chapter)

Note: Keep records meeting the criteria specified in chapter 296-62 WAC, Part B, Access to records, for the length of time specified in that chapter.

NEW SECTION

WAC 296-824-12010 Incident requirements. Recognize emergencies and initiate a response

You must:

Make sure employees follow procedures in your emergency response plan to:

– Recognize when an emergency response must be initiated

– Notify employees, and others designated in your plan, of the release

– Follow immediate emergency procedures

– Prevent the incident from increasing in severity or to secure the operation.

NEW SECTION

WAC 296-824-12020 Implement and maintain an incident command system (ICS).

You must:

(1) Make sure a single individual, acting as the incident commander (IC), is in charge of the site-specific incident command system (ICS) and acts within their designated role and training level.

Note: For multiemployer worksites:

– The IC has responsibility for controlling emergency response operations at the site for all employers.

– Emergency response plans should be consistent in designating who assumes the IC position.

If the first employee arriving at the scene is not trained as an IC (see Table 5, Training Requirements for Incident Commanders and Specialist Employees, WAC 296-824-11020), they may take control of the incident within their designated role and training level.

(2) Make sure all employers' emergency responders and their

communications are coordinated and controlled by the IC.

Note: The IC may delegate tasks to subordinates (within their training level).

(3) Make sure each employer at the scene has designated a representative to assist the IC.

(4) Establish security and control of the site as specified in your written emergency response plan.

NEW SECTION

WAC 296-824-12030 Prepare skilled support personnel.

Note: The duties of skilled support personnel are described in Table 1, Roles and Duties of Emergency Responders.

You must:

(1) Make sure that your skilled support personnel (including those employees who are not regularly employed by you) who could be exposed to on-scene hazards are given an initial briefing at the site before they participate in any emergency response. The initial briefing must include:

What chemical hazards are involved

What duties are to be performed

Instruction in the wearing of appropriate personal protective equipment

Note: Skilled support personnel do not need to comply with the other training requirements of this chapter.

(2) Make sure the safety and health precautions given to your employees are also given to skilled support personnel.

NEW SECTION

WAC 296-824-12040 Make sure the incident commander oversees activities during the response.

The employer of the incident commander (IC) must:

(1) Identify all hazardous substances and conditions present, within their training level, using site analysis and maximum exposure limits, when appropriate.

(2) Implement emergency response procedures appropriate to the hazardous substances and conditions present, such as:

Procedures that address the use of engineering controls, hazardous substance handling, and new technologies

Procedures that address decontamination

Procedures that address PPE

Procedures that limit the number of personnel to those who are actively performing emergency response operations, in areas where exposure could exist.

(3) Designate an incident safety officer (ISO).

Make sure the ISO demonstrates knowledge about operations being implemented at the emergency response site. They must:

– Identify and evaluate hazards

– Communicate with the IC about hazards, immediately informing the IC of corrective actions that must be taken when conditions are judged to be:

An imminent danger

OR

Immediately dangerous to life or health (IDLH).

– Provide direction about the safety of operations.

NEW SECTION

WAC 296-824-12050 Use the buddy system in danger areas.

You must:

Make sure operations and tasks (including limited actions) in danger areas are conducted using the buddy system in teams of two or more.

Definition:

Danger areas are areas where conditions pose a serious danger to employees, such as areas where:

Immediately dangerous to life or health (IDLH) conditions could exist.

OR

High levels of exposure to toxic substances could exist.

OR

There is a potential for exceeding the lower explosive limit (LEL), also known as the lower flammability limit (LFL), of a hazardous substance.

NEW SECTION

WAC 296-824-12060 Provide rescue and medical assistance.

You must:

(1) Provide stand-by employees equipped with the same level of personal protective equipment (PPE) as the entrants, for assistance or rescue.

Note: The buddy system applies to stand-by employees (see WAC 296-824-12050).

One of the two stand-by employees can be assigned to another task provided it does not interfere with the performance of the stand-by role.

Rescue equipment should be selected and provided based on the types of rescue situations that could occur.

You must:

(2) Make sure employees trained in first aid are readily available with necessary medical equipment and have a way to transport the injured.

Note: Employee training is covered by WAC 296-800-150, first aid. This rule requires training on the eighteen subjects listed in addition to any subjects that are specific to your workplace emergency hazards (for example: If exposure to corrosive substances could occur, training would need to include first-aid procedures for treating chemical burns).

Employers who designate and train their employees to provide first aid are covered by WAC 296-62-08001 through 296-62-08005, bloodborne pathogens.

NEW SECTION

WAC 296-824-13010 Personal protective equipment. Use appropriate personal protective equipment (PPE).

Note: Only properly trained employees should select PPE. Hazardous materials technicians and hazardous materials specialists can select PPE within the competencies specified in Table 4.

Selection requirements in other PPE rules also apply, including:

– WAC 296-800-160, Personal protective equipment.

– Chapter 296-62 WAC, Part E, Respiratory protection.

– WAC 296-24-58505, Fire brigades.
– Chapter 296-305 WAC, Safety standards for fire fighting.

You must:

Provide employees with appropriate PPE and make sure it is used if hazards could be present.

– Select PPE (such as respirators, gloves, protective suits and other PPE) based on:

An evaluation of the performance characteristics (such as breakthrough time and hazardous substance-specificity of the material or item) relevant to the requirements and limitations of the site.

Task-specific conditions and durations.

The hazards and potential hazards of the site (see Table 9, Selecting PPE for Specific Hazards).

– Select totally encapsulating chemical protective (TECP) suits, as specified in Table 9, that:

Maintain positive air pressure.

Prevent inward test gas leakage of more than 0.5 percent.

Note: Follow the manufacturer's recommended procedure for testing a TECP suit's ability to maintain positive air pressure and prevent inward gas leakage. Other established test protocols for these suits, for example NFPA 1991 and ASTM F1052-97, may also be used.

Table 9
Selecting PPE for Specific Hazards

If:	**Then:**
Inhalation hazards could be present.	Positive-pressure (pressure-demand) self-contained breathing apparatus (SCBA) **OR** A decreased level of respiratory protection only when the incident commander determines, from air monitoring results, that employees will be adequately protected.
Chemical exposure levels will create a substantial possibility of: Immediate death. Immediate serious illness or injury. Reduced ability to escape.	Either positive-pressure (pressure-demand): SCBA Air-line respirators equipped with an escape air supply.
Skin absorption of a hazardous substance may result in a substantial possibility of: Immediate death. Immediate serious illness or injury. Reduced ability to escape.	Protection equivalent to Level A including a totally encapsulating chemical protective (TECP) suit.

NEW SECTION

WAC 296-824-13020 Control hazards created by personal protective equipment (PPE).

You must:

Control hazards created by the use of PPE, including:

– Heat stress due to extremely high temperatures.

– Any other employee health hazard and consideration.

NEW SECTION

WAC 296-824-13030 Use personal protective equipment (PPE) properly.

You must:

(1) Make sure employees inspect PPE before, during and after use, following your plan's procedures.

(2) Make sure employees put on (don) and remove (doff) PPE following your plan's procedures.

(3) Make sure employees do not interchange self-contained breathing apparatus (SCBA) air cylinders from different manufacturers, unless all of the following apply:

There is a life-saving emergency

You need a supplemental air supply

The cylinders are of the same capacity and pressure rating. (4) Make sure compressed air cylinders used with SCBAs meet the testing and service life requirements of the United States Department of Transportation (USDOT). Search at: *http://www.dot.gov.*

Note: You can also check with the cylinder manufacturers to obtain USDOT test and service life specifications.

You must:

(5) Make sure PPE is maintained in a safe and reliable condition using your plan's procedures.

PPE maintenance includes:

Decontamination

Cleaning

Inspection

Identification of damage or defects

Parts repair or replacement

Storage or disposal.

NEW SECTION

WAC 296-824-14010 Postemergency response.

Important:

Postemergency response is the stage of the emergency response where the immediate threat from the release has been stabilized or eliminated, and cleanup of the site has started.

When cleanup is done by the employees who were part of the initial emergency response, the employees are not covered by this section (however, training, PPE and other requirements in WAC 296-824-11010 through 296-824-13030 apply to these employees).

You must:

(1) Follow Table 10 to determine which requirements apply to your postemergency response activities.

(2) Maintain clean-up equipment as specified in Table 10.

Table 10
Rules that Apply to Postemergency Response Activities

When postemergency response cleanup is performed by employees who were not part of the initial emergency response and:	The following rules or requirements apply:

It is necessary to remove hazardous substances, health hazards and contaminated materials (example: Soil) from the site	Chapter 296-62 WAC, Part P, Hazardous waste operations and treatment, storage and disposal facilities.
Cleanup is done on plant property using plant or workplace employees **AND** It is not necessary to remove hazardous substances, health hazards and contaminated materials from the site.	For training: WAC 296-24-567(1), Employee emergency action plans Chapter 296-62 WAC, Part E, Respiratory protection WAC 296-800-170, Employer chemical hazard communication Other appropriate training requirements relevant to personal protective equipment (PPE) and decontamination For equipment: Make sure that all equipment used for clean-up work is serviced and inspected before use.

NEW SECTION

WAC 296-824-15010 Definitions. The following definitions are specific to this chapter:

Annually

Any twelve-month cycle.

Buddy system

A system of organizing employees (who enter or stand by danger areas) into work groups, so each employee can be observed by at least one other member of the group. The purpose of this system is to provide rapid assistance to employees in an emergency.

Clean-up operation(s)

An operation where hazardous substances are removed, contained, incinerated, neutralized, stabilized, cleared up or, in any other manner, processed or handled with the goal of making the site safer for people or the environment.

Danger area

Areas where conditions pose a serious danger to employees, such as areas where:

Immediately dangerous to life or health (IDLH) conditions could exist

OR

High levels of exposure to toxic substances could exist

OR

There is a potential for exceeding the lower explosive limit (LEL), also known as the lower flammability limit (LFL), of a substance.

Decontamination

Removing hazardous substances from employees and their equipment so potential adverse health effects will not occur. **Emergency response**

An organized response to an anticipated release of a hazardous substance that is, or could become an uncontrolled release. **Emergency response plan**

A written plan that requires coordination between emergency response participants, and contains procedures, criteria, and other information that will be applied to emergency response operations. Each employer's plan should be compatible with local and state plans.

Engineering controls

Methods of controlling employee exposures by modifying the source or reducing the quantity of contaminants.

Hazardous materials team (HAZMAT team)

A group of employees who are expected to perform responses to releases, or possible releases, of hazardous substances for the purpose of control and stabilization. As a result of their duties, HAZMAT team members may have close contact with hazardous substances.

Note: A HAZMAT team may be a separate component of a fire brigade or fire department.

Hazardous substance

Any of the following substances that could adversely affect an exposed employee's health or safety:

Substances defined under section 101(14) of the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA) or "Superfund" Act (visit: *http://www.epa.gov*)

Biological or other disease-causing agents released that could reasonably be expected to cause death, disease, behavioral abnormalities, cancer, genetic mutation, physiological malfunctions (including malfunctions in reproduction) or physical deformations in a person or their offspring when the person:

– Is directly exposed to the agent in the environment

– Directly ingests, inhales, or assimilates the agent from the environment

– Indirectly ingests the agent through a food chain

Substances listed by the United States Department of Transportation as hazardous materials under Title 49 (Transportation) in the Code of Federal Regulations (CFR), Part 172, section 101 and appendices (visit: *http://www.nara.gov* and search for "List of CFR subjects")

Hazardous wastes as defined in this chapter.

Hazardous waste

A substance designated by chapter 173-303 WAC, Dangerous waste regulations, department of ecology, as a dangerous waste or an extremely hazardous waste and any waste fitting the definition of "health hazard" in this chapter.

Note: For department of ecology regulations, visit: *http://www.ecy.wa.gov*

Health hazard

A chemical, a mixture of chemicals, or a pathogen for which there is statistically significant evidence, based on at least one study conducted according to established scientific principles, that acute or chronic health effects may occur in exposed employees.

The term "health hazard" includes stress due to temperature extremes and chemicals that are:

Carcinogens

Toxic or highly toxic agents

Reproductive toxins, irritants, corrosives, sensitizers, hepatotoxins, nephrotoxins, or neurotoxins

Agents acting on the hematopoietic system agents that damage lungs, skin, eyes, or mucous membranes. (Detailed definitions of these chemical terms can be found in the Safety and health core rules, WAC 296-800-170, chemical hazard communication.)

Incident command system (ICS)

An organized approach to control and manage operations at an emergency response incident.

Incidental release

A release that can be safely controlled at the time of the release and does not have the potential to become an uncontrolled release.

Note:

Example of a situation that results in an incidental release:

A tanker truck is receiving a load of hazardous liquid when a

leak occurs. The driver knows the only hazard from the liquid is minor skin irritation. The employer has trained the driver on procedures and provided equipment to use for a release of this quantity. The driver puts on skin protection and stops the leak. A spill kit is used to contain, absorb, and pick up the spilled material for disposal.

Immediately dangerous to life or health (IDLH)

Any atmospheric condition that would:

Cause an immediate threat to life

OR

Cause permanent or delayed adverse health effects

OR

Interfere with an employee's ability to escape

Limited action

Action necessary to:

Secure an operation during emergency responses,

OR

Prevent an incident from increasing in severity.

Examples include shutting down processes and closing emergency valves.

Lines of authority

A preestablished ranking of individuals, qualified to assume a commanding role during an emergency response, noted in an emergency response plan and implemented during a response. This is most important when responders from multiple employers could participate in an emergency response.

Lower explosive limit (LEL)

See lower flammable limit (LFL).

Lower Flammable limit (LFL)

The lowest concentration of a material that will propagate a flame. The LFL is usually expressed as a percent (by volume) of the material in air (or other oxidant).

Must

Must means mandatory.

Permissible exposure limit (PEL)

Means the established time-weighted-average (TWA) concentration or ceiling concentration of a contaminant that must not be exceeded. The exposure, inhalation, or dermal permissible limit specified in chapter 296-62 WAC, Part H, Air contaminants. **Personal protective equipment (PPE)**

Protective items designed to be worn by the user to protect them against airborne, skin contact and other hazards. This includes items such as respiratory protection, protective suits, gloves, eye protection, etc.

Postemergency response

The stage of the emergency response where the immediate threat from the release has been stabilized or eliminated, and cleanup of the site has started.

Published exposure level

Exposure limits published in *"National Institute for Occupational Safety and Health (NIOSH) Recommendations for Occupational Safety and Health"* (DHHS publication #92-100, 1992).

If an exposure limit is not published by NIOSH, then "published exposure level" means the exposure limits published by the American Conference of Governmental Industrial Hygienists (ACGIH) in *"TLVs and BEIs-Threshold Limit Values for Chemical Substances and Physical Agents"* (1999 edition).

Note: Additional exposure levels published by recognized organizations such as the American Industrial Hygiene Association are not required to be observed by this rule; however, they may be a useful resource when a hazardous substance is not covered by NIOSH and ACGIH publications.

Release

A spill, leak, or other type of hazardous substance discharge.

Uncontrolled release

A release where significant safety and health risks could be created. Releases of hazardous substances that are either incidental or could not create a safety or health hazard (i.e., fire, explosion or chemical exposure) are not considered to be uncontrolled releases.

Examples of conditions that could create a significant safety and health risk:

Large-quantity releases
Small releases that could be highly toxic
Potentially contaminated individuals arriving at hospitals
Airborne exposures that could exceed a WISHA permissible exposure limit or a published exposure limit and employees are not adequately trained or equipped to control the release.

Example of an uncontrolled release:

A forklift driver knocks over a container of a solvent-based liquid, releasing the contents onto the warehouse floor. The driver has been trained to recognize the vapor is flammable and moderately toxic when inhaled. The driver has not been trained or provided appropriate equipment to address this type of spill. In this situation, it is not safe for the driver to attempt a response. The driver needs to notify someone of the release so an emergency response can be initiated.

Workplace

A fixed facility

OR

A temporary location (such as a traffic corridor)

OR

Locations where employees respond to emergencies.

You

The employer. For a complete definition of "employer" see Safety and health core rules, chapter 296-800 WAC.

PART U-4
EMERGENCY RESPONSE

NEW SECTION

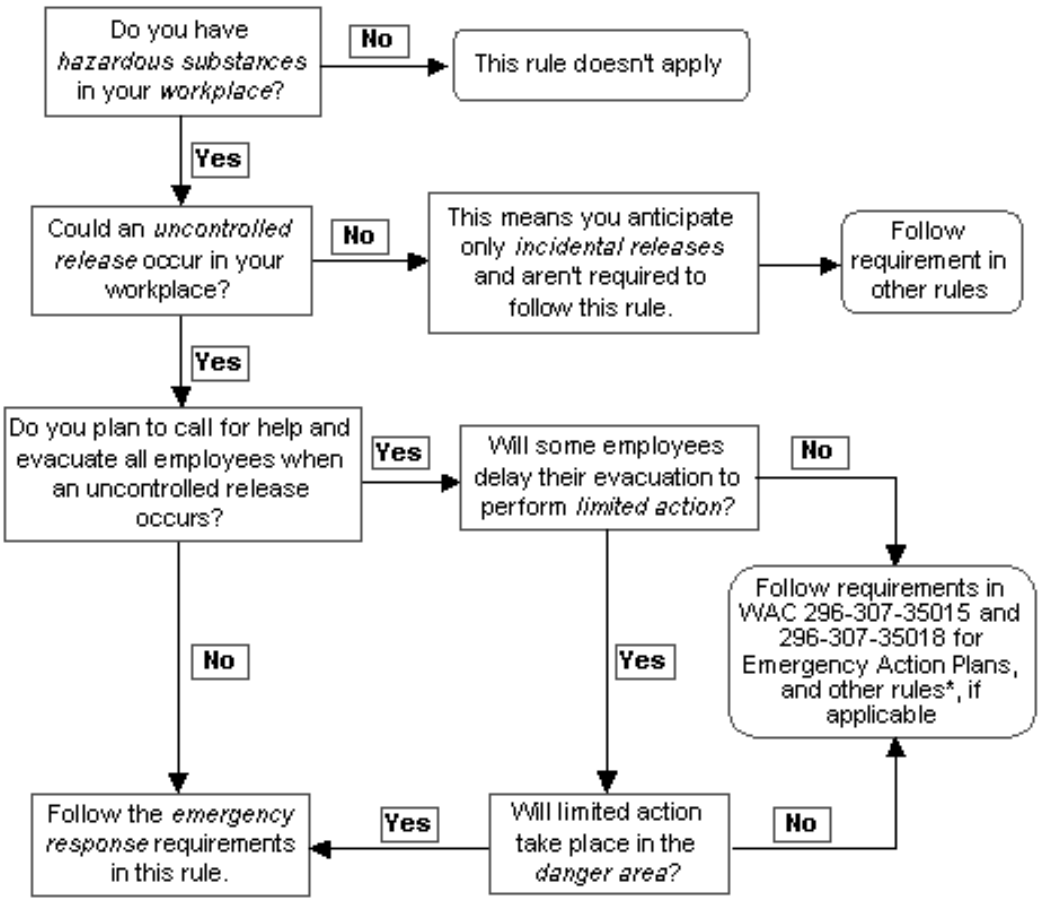
WAC 296-307-452 Scope. ***What is the purpose of WAC 296-307-452, Emergency response to hazardous substance releases?***

To state the minimum requirements that help you protect the safety and health of your employees during a response to a *hazardous substance releases* in your *workplace* or any other location.

Do the requirements of this rule apply to your workplace?

This section applies if your employees are, or could become, involved in responding to uncontrolled releases of hazardous substances in your workplace or any other location. Use the scope flow chart, and definitions that follow, to determine if this section applies to your workplace(s). Defined words are *italicized* in the flow chart.

307 - Flowchart



*The flow chart references other rules applicable to your workplace depending on conditions and hazards. Examples include:

WAC 296-62-400, Hazardous chemicals in laboratories
WAC 296-62-071, Respiratory protection

Definitions applicable to the flow chart (see WAC 296-307-46000 for additional definitions used in this section):

Danger area

Areas where conditions pose a serious danger to employees, such as areas where:

Immediately dangerous to life or health (IDLH) conditions could exist

OR

High levels of exposure to toxic substances could exist

OR

There is a potential for exceeding the lower explosive limit (LEL), also known as the lower flammability limit (LFL), of a substance.

Emergency response

A response to an anticipated release of a hazardous substance that is, or could become, an *uncontrolled release*.

Hazardous substance

Any biological, radiological, or chemical substance that can have adverse effects on humans. (See WAC 296-307-46000 for a more specific definition.)

Immediately dangerous to life or health (IDLH)

Any atmospheric condition that would:

Cause an immediate threat to life

Cause permanent or delayed adverse health effects

Interfere with an employee's ability to escape

Incidental release

A release that can be safely controlled at the time of the release and does not have the potential to become an *uncontrolled release*.

Example of a situation that results in an incidental release:

A tanker truck is receiving a load of hazardous liquid when a leak occurs. The driver knows the only hazard from the liquid is minor skin irritation. The employer has trained the driver on procedures and provided equipment to use for a release of this quantity. The driver puts on skin protection and stops the leak. A spill kit is used to contain, absorb, and pick up the spilled material for disposal.

Limited action

Action necessary to:

Secure an operation during emergency responses,

OR

Prevent an incident from increasing in severity.

Examples include shutting down processes and closing emergency valves.

Release

A spill, leak, or other type of hazardous substance discharge.

Uncontrolled release

A release where significant safety and health risks could be created. Releases of hazardous substances that are either incidental or could not create a safety or health hazard (i.e., fire, explosion or chemical exposure) are not considered to be uncontrolled releases.

Examples of conditions that could create a significant safety and health risk:

Large-quantity releases

Small-releases that could be highly toxic

Airborne exposures that could exceed a WISHA permissible exposure limit or a published exposure limit and employees are not adequately trained or equipped to control the release.

Example of an uncontrolled release:

A forklift driver knocks over a container of a solvent-based liquid, releasing the contents onto the warehouse floor. The driver has been trained to recognize the vapor is flammable and moderately toxic when inhaled. The driver has not been trained or provided appropriate equipment to address this type of spill. In this situation, it is not safe for the driver to attempt a response. The driver needs to notify someone of the release so an emergency response can be initiated.

Workplace

A fixed facility

OR

A temporary location (such as a traffic corridor)

OR

Locations where employees respond to emergencies.

Summary

Your responsibility:

To anticipate, plan for, and manage emergency response operations so employees are protected from hazardous substances and conditions.

Note: Other chapters may apply to your workplace, such as:
Chapter 296-62 WAC, General occupational health standards

You will find some safety and health requirements (for example, personal protective equipment) are addressed on a general level in the core rules, while being addressed for a specific application in this section. When this happens, both requirements apply and should not conflict.

If you are uncertain which requirements to follow, you must comply with the more protective requirement. Contact your local L&I office if you need assistance in making this determination.

You must:

WAC 296-307-45210 Planning
WAC 296-307-45220 Training
WAC 296-307-45230 Medical surveillance
WAC 296-307-45240 Keep records
WAC 296-307-45400 Incident requirements
WAC 296-307-45410 Implement and maintain an incident command system (ICS) (incident command system)
WAC 296-307-45420 Prepare skilled support personnel
WAC 296-307-45430 Make sure the incident commander oversees activities during the response
WAC 296-307-45440 Use the buddy system in danger areas
WAC 296-307-45450 Provide rescue and medical assistance
WAC 296-307-45600 Personal protective equipment
WAC 296-307-45610 Control hazards created by personal protective equipment (PPE)
WAC 296-307-45620 Use personal protective equipment (PPE) properly
WAC 296-307-45800 Postemergency response
WAC 296-307-46000 Definitions.

NEW SECTION

WAC 296-307-45210 Planning. Develop an emergency response plan.

Note: You may already have an emergency response plan, such as required by chapter 296-62 WAC, Part P, Hazardous waste operations and treatment, storage and disposal facilities or by state and locally coordinated response efforts (Section 303 of Superfund Amendments and Reauthorization Act (SARA), Title III). You may use those plans to

comply with this section, if they include the items listed below.

Before a written emergency response plan can be developed, you will need to anticipate the types of uncontrolled releases that employees could encounter in your workplace(s).

You must:

(1) Make sure your plan is written and adequately addresses, as a minimum, all of the following:

Preemergency planning and coordination with additional responders (including personnel from other employers such as: Fire departments, law enforcement agencies, emergency medical services, and state or federal agencies).

Personnel roles, (see Table 1) and lines of authority and communications for all affected parties including responders

Employee training (see WAC 296-307-45220, train your employees), for more detail:

Note: Responders' level of training depends on the duties and roles the employer assigns.

Training for the employees' role should address the competencies specified in Tables 3 through 6.

Training on specific substances may be appropriate depending on the number and characteristics of hazardous substances expected to be encountered. For example, if employees may only respond to one substance, you could provide training (covering the knowledge and skills specified in Tables 3 through 6) relevant to that single substance. If employees might respond to a range of hazardous substances, training may be required to cover categories of hazardous substances.

Videos and automated training methods (for example: Interactive computer based programs) may be used in training; however, instructors must be readily available to:

– Encourage and provide responses to questions for the benefit of the group

– Evaluate employees' understanding of the material

– Provide instructional interaction to the group.

Emergency recognition

Immediate emergency procedures including:

– Methods of alerting employees (see WAC 296-307-345, Employee alarm systems) and outside responders

– Procedures for limited action (emergency prevention)

Note: ***Limited action*** includes shutting down processes, closing emergency valves and other critical actions to secure the operation, or prevent the incident from increasing in severity.

Limited Action and Employee Roles	
If . . .	**Then employees involved would be:**
Limited action could be conducted in the danger area	Considered emergency responders
Limited action will not be conducted in IDLH conditions	Considered evacuees, not emergency responders

– Details of who will evacuate immediately and who will remain behind for limited action

– Evacuation routes and procedures

– How to establish safe distances and places of refuge (for example, during emergency response the incident commander (IC) decides to make changes based on new developments, i.e., changes in the wind direction).

Methods of securing and controlling access to the site

Emergency medical treatment and first aid

A complete personal protective equipment (PPE) program that addresses:

– Selection of PPE including selection criteria to be used and the identification, specified use and limitations of the PPE selected.

– Training on proper use of PPE (including maintenance).

– Hazards created by wearing PPE including heat stress during temperature extremes, and/or other appropriate medical considerations.

– Criteria used for determining the proper fit of PPE.

– Procedures covering proper use of PPE including procedures for inspection, putting it on (donning) and removing it (doffing).

– Maintenance of PPE including procedures for decontamination, disposal and storage.

– Methods used to evaluate the effectiveness of your PPE program.

Note: If a manufacturer's printed information or WISHA rule adequately addresses procedural requirements (such as donning or doffing for PPE), it is not necessary to rewrite this into your program; simply attach the printed information.

You may use written procedures provided by the equipment manufacturer when they meet the requirements of other chapters, including chapter 296-62 WAC, Part E, Respiratory protection.

Emergency equipment

Emergency response procedures

Decontamination procedures determined by a hazardous materials specialist or other qualified individual

Methods to critically assess the response and conduct appropriate follow-up

You must:

(2) Make your written emergency response plan available to employees, their representatives, and WISHA personnel for inspecting or copying.

Note: In situations where multiple employers could respond to an incident, all plans should consistently address:

Who will be designated as the incident commander (IC)

AND

If, when, and how transfer of the incident commander (IC) position will take place.

Table 1
Roles and Duties of Emergency Responders

If the employee's role is:	Then all the following apply. They:
First responder at the awareness level	Are likely to witness or discover a hazardous substance release Are trained to initiate an emergency response by notifying the proper authorities of the release Take no further action beyond notifying the authorities
First responder at the operations level	Respond to actual or potential releases in order to protect nearby persons, property, and/or the environment from the effects of the release Are trained to respond defensively, without trying to stop the release May try to: - Confine the release from a safe distance - Keep it from spreading - Protect others from hazardous exposures
Hazardous materials technician	Respond to releases or potential releases, with the intent of stopping the release Are trained to approach the point of release offensively in order to, either: - Plug - Patch - Stop the release using other methods
Hazardous materials specialist	Respond along with, and provide support to, hazardous materials technicians Are required to have more specific knowledge of hazardous substances than a hazardous materials technician Act as the site activity liaison when federal, state, local, and other government authorities participate

Incident commander	Have ultimate responsibility for: - Direction - Control - Coordination of the response effort - Will assume control of the incident beyond the first responder awareness level
Specialist employee	Are a technical, medical, environmental, or other type of expert May represent a hazardous substance manufacturer, shipper, or a government agency May be present at the scene or may assist from an off-site location Regularly work with specific hazardous substances Are trained in the hazards of specific substances Are expected to give technical advice or assistance to the incident commander or incident safety officer, when requested
Skilled support personnel	Are needed to perform an immediate, specific emergency support task at the site Are skilled in the operation of equipment including: – Earth moving equipment – Cranes – Hoisting equipment
Incident safety officer	Are designated by the incident commander Are knowledgeable in operations being implemented at the site Have specific responsibility to – Identify and evaluate hazards – Provide direction on employee safety matters

NEW SECTION

WAC 296-307-45220 Training.

Train your employees

Note: Use Tables 3 through 6 to identify your employees' training competencies.
You may conduct training internally, or use outside training services to comply with this section.
– When outside trainers are hired, you are still responsible for making sure the requirements of this section are met. For example, employers may compare the course outline to the competencies listed in Tables 3 through 6.

You must:

Make sure employees are appropriately trained for their assigned roles and duties as follows:

EXEMPTION: Skilled support employees are not covered by the training requirements of this section (see WAC 296-307-45420).

– Initial training:

Provide initial training before the employee is allowed to participate in an actual emergency response operation.

Note: When first responders at the awareness or operations level have sufficient experience to objectively demonstrate competencies specified in Table 3, you may accept experience instead of training.

Make sure initial training adequately addresses the competencies in Tables 3 through 6 and the minimum training durations in Table 2.

Certify that employees objectively demonstrate competencies specified in Tables 3 through 6 (except for employees trained as first responders at the awareness level).

- **Retraining (refresher) training:**
  Provide retraining annually
  Make sure retraining covers necessary content
  Document training or demonstrated competency

  Note: Retraining is not required when employees demonstrate competencies annually and a record is kept of the demonstration methodology used.

- **Trainer qualifications**:
  Verify trainers have satisfactorily completed an instructors' training course for the subjects they teach. For example, courses offered by the United States National Academy, or equivalent courses are acceptable.

  OR

  Have the educational and instructional experience necessary for training.

- **Specialist employees:**
  Specialist employees who have been sent to the scene to advise or assist must receive training or demonstrate competency in their specialty, annually.

Table 2
Minimum Training Durations for all Responders

If you are a:	**Then:**
First responder at the awareness level	Training duration needs to be sufficient to provide the required competencies
First responder at the operations level	You need a minimum of 8 hours training (see Table 3)
Hazardous materials technician	You need a minimum of 24 hours training (see Table 4)
Hazardous materials specialist	You need a minimum of 24 hours training (see Table 4)
Incident commander	You need a minimum of 24 hours training (see Table 5)

Table 3
Competencies for First Responders at the Awareness Level and Operations Level

Employees must be able to show they:	When they are designated as First Responders at the:	
	Awareness Level	Operations Level
Understand what hazardous substances are and their associated risks.	X	X
Recognize the presence of hazardous substances in an emergency.	X	X
Can identify the hazardous substances, when possible.	X	X
Understand the potential consequences of hazardous substances in an emergency.	X	X
Understand the role of a first responder at the awareness level as described in: The employer's emergency response plan, including site security and control. The United States Department of Transportation's Emergency Response Guidebook. *(search at: http://www.dot.gov).*	X	X

Can use The United States Department of Transportation's Emergency Response Guidebook.	X	X
Recognize the need for additional resources and the need to notify the incident's communication center accordingly.	X	X
Know basic hazard and risk assessment techniques.		X
Can select and use personal protective equipment (PPE) appropriate for first responder operations level.		X
Understand basic hazardous materials terms.		X
Can perform basic control, containment, and/or confinement operations within the capabilities of the resources and PPE available.		X
Can implement decontamination procedures to their level training.		X
Understand relevant standard operating and termination procedures.		X

Table 4
Competencies for Hazar dous Materials Technicians and Hazardous Materials Specialist

Employees must be able to show they:	When they are designated as a Hazardous Materials:	
	Technician	Specialist
Have the competencies specified for the first responder operations level. (See Table 3)	X	X
Can implement an employer's emergency response plan.	X	X
Can function within their assigned role in the incident command system.	X	X
Understand hazard and risk assessment techniques.	X	X
Understand basic chemical and toxicological terminology and behavior.	X	X
Can use field survey instruments and equipment to classify, identify, and verify materials at the incident.	X	X
Can select and use personal protective equipment (PPE) appropriate for hazardous materials technicians.	X	X
Can perform advance control, containment, and/or confinement operations within the capabilities of the resources and PPE available.	X	X
Can implement decontamination procedures to their level of training.	X	X
Understand termination procedures.	X	X
Can implement the local emergency response plan.		X
Know of the state emergency response plan.		X
Can develop a site safety and control plan.		X
Understand chemical, radiological, and toxicological terminology and behavior.		X
Understand in-depth hazard and risk techniques.		X
Can use advanced survey instruments and equipment to classify, identify and verify materials at the incident.		X

Can select and use proper specialized chemical PPE given to hazardous materials specialists.		X
Can perform specialized control, containment, and/or confinement operations within the capabilities of the resources and PPE available.		X
Can determine decontamination procedures.		X

Table 5 **Competencies for Incident Commanders**
Employees designated as Incident Commanders must be able to show they:
Have competencies specified for the First Responder Operations Level. (See Table 3.)
Know of the state emergency response plan and the Federal Regional Response Team.
Can implement the local emergency response plan.
Can implement the employer's emergency response plan.
Have knowledge of the incident command system (ICS) and understand how they relate to it.
Can implement the employer's ICS.
Understand the hazards and risks associated with employees working in chemical protective clothing.
Understand the importance of decontamination procedures.
Note: If the first employee arriving at the scene is not trained as an IC, they may take control of the incident within their designated role and training level.

Table 6 **Competencies for Specialist Employees**
Employees designated as Specialist Employees must be able to show they:
Have current knowledge in their field regarding safety and health practices relating to the specific hazardous substances.
Have the knowledge of the ICS and understand how they relate to it.
Understand the care and use of personal protective equipment (PPE).

NEW SECTION

WAC 296-307-45230 Medical surveillance. Provide medical surveillance to employees.

You must:

(1) Provide medical surveillance for employees to comply with Tables 7 and 8, and the following:

Make medical surveillance available at:

– Reasonable times and places.

– No cost to employees, including travel associated costs such as mileage, gas or bus fare if the employee is required to travel off site

AND

– Wages for additional time spent outside of employees normal work hours.

Make sure a licensed physician performs or supervises exams and procedures.

Give complete information to the examining physician including:

– A copy of this section.

– A description of the employee's duties that relate to hazardous substance exposure.

– The hazardous substance exposure levels anticipated for the employee.

– A description of the personal protective equipment (PPE) the employee could use.

– Information available from previous medical examinations.

– The medical evaluation information required by chapter 296-62 WAC, Part E, Respiratory protection.

Medical exams must include, at a minimum:

– A medical history

– A work history (or updated history if on file)

– A special emphasis on:

Assessment of symptoms related to handling hazardous substances

Health hazards

Evaluation of fitness for duty (including the ability to wear any personal protective equipment (PPE) or other conditions that may be expected at the workplace)

– Other content as determined by the examining physician.

Note: The physician should consult the *Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities* and the *Medical Management Guidelines for Acute Chemical Exposure* (search OSHA website: http://www.osha.gov).

(2) Obtain the physician's written opinion and give a copy to the employee that includes:

A statement of whether or not medical conditions were found which would increase the employee's risk for impairment during emergency response work or respirator use.

– Do not include specific findings or diagnoses unrelated to occupational exposures.

Limitations recommended to the employee's assigned work, if any.

Exam and test results if the employee requests this information.

A statement that affirms the employee has been confidentially informed of medical exam results (including medical conditions requiring follow-up).

Table 7
Medical Surveillance for Employee Categories

If the employee is covered by this section and is:	**Then you must:**
Exposed for at least 30 days a year to health hazards or hazardous substances at or above the permissible exposure limit or published exposure levels (even when respirators are used), **OR** Required to wear a respirator for at least 30 days a year.*	Offer standard medical surveillance as specified in Table 8.*
A hazardous materials (HAZMAT) team member A hazardous materials specialist	Provide standard medical surveillance as specified in Table 8.
An emergency responder who shows immediate or delayed signs or symptoms possibly resulting from exposure to hazardous substances during an incident.	Provide incident-specific medical surveillance as specified in Table 8.

Not an emergency responder and: – May be injured – Shows immediate or delayed signs or symptoms possibly resulting from exposure to hazardous substances – May have been exposed to hazardous substances at concentrations above the permissible exposure limits (PELs) or the published exposure levels without appropriate PPE.	Offer incident-specific medical surveillance as specified in Table 8.

*Note: A medical evaluation for respirator use is required by chapter 296-62 WAC, Part E, Respiratory protection, for those employees who have not been cleared for respirator use during medical surveillance activities.

Table 8
Frequency of Exams and Consultations

If the employee is covered by:	**Then medical surveillance must include:**
Standard medical surveillance	Exams and consultations: – Before assignment. **Note:** If the employee is a hazardous materials (HAZMAT) team member or a hazardous materials specialist, the employee must receive a baseline physical examination. – At least once every 12 months after their initial assignment unless the physician believes a shorter, or longer interval (but no more than 24 months) is appropriate. – Whenever employees are reassigned to an area where they will no longer be covered by medical surveillance and they have not been examined within the past 6 months. – As soon as possible after an employee reports: Signs or symptoms of possible overexposure to hazardous substances or health hazards Injury Exposure above the permissible exposure limits or published exposure levels – At the termination of their employment unless they were examined within the past 6 months.
Incident-specific medical surveillance	Medical consultations and exams: – As soon as possible following the incident or development of signs or symptoms. – At additional times, if the physician determines follow-up is medically necessary.

NEW SECTION

WAC 296-307-45240 Keep records.
You must:
Keep a record of:
– Name and Social Security number of the employee receiving medical surveillance
– Physicians' written opinions, recommended limitations, and results of examinations and tests
– Any employee medical complaints regarding hazardous substance

exposures

– A copy of all information given to the examining physician (except a copy of this section).

NEW SECTION

WAC 296-307-45400 Incident requirements. Recognize emergencies and initiate a response

You must:

Make sure employees follow procedures in your emergency response plan to:

– Recognize when an emergency response must be initiated

– Notify employees, and others designated in your plan, of the release

– Follow immediate emergency procedures

– Prevent the incident from increasing in severity or to secure the operation.

NEW SECTION

WAC 296-307-45410 Implement and maintain an incident command system (ICS).

You must:

(1) Make sure a single individual, acting as the incident commander (IC), is in charge of the site-specific incident command system (ICS) and acts within their designated role and training level.

Note: For multiemployer worksites:
– The IC has responsibility for controlling emergency response operations at the site for all employers.
– Emergency response plans should be consistent in designating who assumes the IC position.
If the first employee arriving at the scene is not trained as an IC (see Table 5, Training Requirements for Incident Commanders and Specialist Employees, WAC 296-824-11020), they may take control of the incident within their designated role and training level.

(2) Make sure all employers' emergency responders and their communications are coordinated and controlled by the IC.

Note: The IC may delegate tasks to subordinates (within their training level).

(3) Make sure each employer at the scene has designated a representative to assist the IC.

(4) Establish security and control of the site as specified in your written emergency response plan.

NEW SECTION

WAC 296-307-45420 Prepare skilled support personnel. **Note:** The duties of skilled support personnel are described in Table 1, Roles and Duties of Emergency Responders.

You must:

(1) Make sure that your skilled support personnel (including those employees who are not regularly employed by you) who could be exposed to on-scene hazards are given an initial briefing at the site before they

participate in any emergency response. The initial briefing must include:

What chemical hazards are involved

What duties are to be performed

Instruction in the wearing of appropriate personal protective equipment

Note: Skilled support personnel do not need to comply with the other training requirements of this section.

(2) Make sure the safety and health precautions given to your employees are also given to skilled support personnel.

NEW SECTION

WAC 296-307-45430 Make sure the incident commander oversees activities during the response. The employer of the incident commander (IC) must:

(1) Identify all hazardous substances and conditions present, within their training level, using site analysis and maximum exposure limits, when appropriate.

(2) Implement emergency response procedures appropriate to the hazardous substances and conditions present, such as:

Procedures that address the use of engineering controls, hazardous substance handling, and new technologies

Procedures that address decontamination

Procedures that address PPE

Procedures that limit the number of personnel to those who are actively performing emergency response operations, in areas where exposure could exist.

(3) Designate an incident safety officer (ISO).

Make sure the ISO demonstrates knowledge about operations being implemented at the emergency response site. They must:

– Identify and evaluate hazards

– Communicate with the IC about hazards, immediately informing the IC of corrective actions that must be taken when conditions are judged to be:

An imminent danger

OR

Immediately dangerous to life or health (IDLH).

– Provide direction about the safety of operations.

NEW SECTION

WAC 296-307-45440 Use the buddy system in danger areas.

You must:

Make sure operations and tasks (including limited actions) in danger areas are conducted using the buddy system in teams of two or more.

Definition:

Danger areas are areas where conditions pose a serious danger to employees, such as areas where:

Immediately dangerous to life or health (IDLH) conditions could exist.

OR

High levels of exposure to toxic substances could exist.

OR

There is a potential for exceeding the lower explosive limit (LEL), also known as the lower flammability limit (LFL) of a hazardous substance.

NEW SECTION

WAC 296-307-45450 Provide rescue and medical assistance.

You must:

(1) Provide stand-by employees equipped with the same level of personal protective equipment (PPE) as the entrants, for assistance or rescue.

Note: The buddy system applies to stand-by employees (WAC 296-307-45440).

One of the two stand-by employees can be assigned to another task provided it does not interfere with the performance of the stand-by role.

Rescue equipment should be selected and provided based on the types of rescue situations that could occur.

You must:

(2) Make sure employees trained in first aid are readily available with necessary medical equipment and have a way to transport the injured.

Note: Employee training is covered by WAC 296-800-150, first aid. This rule requires training on the eighteen subjects listed in addition to any subjects that are specific to your workplace emergency hazards (for example: If exposure to corrosive substances could occur, training would need to include first-aid procedures for treating chemical burns).

Employers who designate and train their employees to provide first aid are covered by WAC 296-62-08001 through 296-62-08005, bloodborne pathogens.

NEW SECTION

WAC 296-307-45600 Personal protective equipment.

Note: Only properly trained employees should select PPE. Hazardous materials technicians and hazardous materials specialists can select PPE within the competencies specified in Table 4.

Selection requirements in other PPE rules also apply, including:

– Chapter 296-62 WAC, Part E, Respiratory protection.

– Chapter 296-305 WAC, Safety standards for fire fighting.

You must:

Provide employees with appropriate PPE and make sure it is used if hazards could be present.

– Select PPE (such as respirators, gloves, protective suits and other PPE) based on:

An evaluation of the performance characteristics (such as breakthrough time and hazardous substance-specificity of the material or item) relevant to the requirements and limitations of the site.

Task-specific conditions and durations.

The hazards and potential hazards of the site (see Table 9, Selecting PPE for Specific Hazards).

– Select totally encapsulating chemical protective (TECP) suits, as specified in Table 9, that:

Maintain positive air pressure.

Prevent inward test gas leakage of more than 0.5 percent.

Note: Follow the manufacturer's recommended procedure for testing a TECP suit's ability to maintain positive air pressure and prevent inward gas leakage. Other established test protocols for these suits, for example NFPA 1991 and ASTM F1052-97, may also be used.

Table 9
Selecting PPE for Specific Hazards

If:	Then use:
Inhalation hazards could be present.	Positive-pressure (pressure-demand) self-contained breathing apparatus (SCBA) **OR** A decreased level of respiratory protection only when the incident commander determines, from air monitoring results, that employees will be adequately protected.
Chemical exposure levels will create a substantial possibility of: Immediate death. Immediate serious illness or injury. Reduced ability to escape.	Either positive-pressure (pressure-demand): SCBA Air-line respirators equipped with an escape air supply.
Skin absorption of a hazardous substance may result in a substantial possibility of: Immediate death. Immediate serious illness or injury. Reduced ability to escape.	Protection equivalent to Level A including a totally encapsulating chemical protective (TECP) suit.

NEW SECTION

WAC 296-307-45610 Control hazards created by personal protective equipment (PPE).

You must:

Control hazards created by the use of PPE, including:

- Heat stress due to extremely high temperatures.
- Any other employee health hazard and consideration.

NEW SECTION

WAC 296-307-45620 Use personal protective equipment (PPE) properly.

You must:

(1) Make sure employees inspect PPE before, during and after use, following your plan's procedures.

(2) Make sure employees put on (don) and remove (doff) PPE following your plan's procedures.

(3) Make sure employees do not interchange self-contained breathing apparatus (SCBA) air cylinders from different manufacturers, unless all of the following apply:

There is a life-saving emergency

You need a supplemental air supply

The cylinders are of the same capacity and pressure rating. (4) Make sure compressed air cylinders used with SCBAs meet the testing and service life requirements of the United States Department of Transportation (USDOT). Search at: *http://www.dot.gov.*

Note: You can also check with the cylinder manufacturers to obtain USDOT test and service life specifications.

You must:

(5) Make sure PPE is maintained in a safe and reliable condition using your plan's procedures. PPE maintenance includes:

Decontamination
Cleaning
Inspection
Identification of damage or defects
Parts repair or replacement
Storage or disposal.

NEW SECTION

WAC 296-307-45800 Postemergency response.

Important:

Postemergency response is the stage of the emergency response where the immediate threat from the release has been stabilized or eliminated, and cleanup of the site has started.

When cleanup is done by the employees who were part of the initial emergency response, the employees are not covered by this section (however, training, PPE and other requirements in WAC 296-307-45600 through 296-307-45620 apply to these employees).

You must:

(1) Follow Table 10 to determine which requirements apply to your postemergency response activities.

(2) Maintain clean-up equipment as specified in Table 10.

Table 10
Rules that Apply to Postemergency Response Activities

When postemergency response cleanup is performed by employees who were not part of the initial emergency response and:	**The following rules or requirements apply:**
It is necessary to remove hazardous substances, health hazards and contaminated materials (example: Soil) from the site	Chapter 296-62 WAC, Part P, Hazardous waste operations and treatment, storage and disposal facilities.
Cleanup is done on plant property using plant or workplace employees **AND** It is not necessary to remove hazardous substances, health hazards and contaminated materials from the site.	For training: WAC 296-307-35015 and 296-307-35018, Employee emergency action plans Chapter 296-62 WAC, Part E, Respiratory protection WAC 296-307-550, Employer chemical hazard communication Other appropriate training requirements relevant to personal protective equipment (PPE) and decontamination For equipment: Make sure that all equipment used for clean-up work is serviced and inspected before use.

NEW SECTION

WAC 296-307-46000 Definitions. The following definitions are specific to this section:

Annually

Any twelve-month cycle.

Buddy system

A system of organizing employees (who enter or stand by danger areas) into work groups, so each employee can be observed by at least one other member of the group. The purpose of this system is to provide rapid assistance to employees in an emergency.

Clean-up operation(s)

An operation where hazardous substances are removed, contained, incinerated, neutralized, stabilized, cleared up or, in any other manner, processed or handled with the goal of making the site safer for people or the environment.

Danger area

Areas where conditions pose a serious danger to employees, such as areas where:

Immediately dangerous to life or health (IDLH) conditions could exist

OR

High levels of exposure to toxic substances could exist

OR

There is a potential for exceeding the lower explosive limit (LEL), also known as the lower flammability limit (LFL), of a substance.

Decontamination

Removing hazardous substances from employees and their equipment so potential adverse health effects will not occur. **Emergency response**

An organized response to an anticipated release of a hazardous substance that is, or could become an uncontrolled release. **Emergency response plan**

A written plan that requires coordination between emergency response participants, and contains procedures, criteria, and other information that will be applied to emergency response operations. Each employer's plan should be compatible with local and state plans.

Engineering controls

Methods of controlling employee exposures by modifying the source or reducing the quantity of contaminants.

Hazardous materials team (HAZMAT team)

A group of employees who are expected to perform responses to releases, or possible releases, of hazardous substances for the purpose of control and stabilization. As a result of their duties, HAZMAT team members may have close contact with hazardous substances.

Note: A HAZMAT team may be a separate component of a fire brigade or fire department.

Hazardous substance

Any of the following substances that could adversely affect an exposed employee's health or safety:

Substances defined under section 101(14) of the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA) or "Superfund" Act (visit: *http://www.epa.gov*)

Biological or other disease-causing agents released that could reasonably be expected to cause death, disease, behavioral abnormalities, cancer, genetic mutation, physiological malfunctions (including malfunctions in reproduction) or physical deformations in a person or their offspring when

the person:

– Is directly exposed to the agent in the environment

– Directly ingests, inhales, or assimilates the agent from the environment

– Indirectly ingests the agent through a food chain

Substances listed by the United States Department of Transportation as hazardous materials under Title 49 (Transportation) in the Code of Federal Regulations (CFR), Part 172, section 101 and appendices (visit: *http://www.nara.gov* and search for "List of CFR subjects")

Hazardous wastes as defined in this section.

Hazardous waste

A substance designated by chapter 173-303 WAC, Dangerous waste regulations, department of ecology, as a dangerous waste or an extremely hazardous waste and any waste fitting the definition of "health hazard" in this section.

Note: For department of ecology regulations, visit: *http://www.ecy.wa.gov*

Health hazard

A chemical, a mixture of chemicals, or a pathogen for which there is statistically significant evidence, based on at least one study conducted according to established scientific principles, that acute or chronic health effects may occur in exposed employees.

The term "health hazard" includes stress due to temperature extremes and chemicals that are:

Carcinogens

Toxic or highly toxic agents

Reproductive toxins, irritants, corrosives, sensitizers, hepatotoxins, nephrotoxins, or neurotoxins

Agents acting on the hematopoietic system agents that damage lungs, skin, eyes, or mucous membranes. (Detailed definitions of these chemical terms can be found in the Safety and health core rules, WAC 296-307-550, chemical hazard communication.)

Incident command system (ICS)

An organized approach to control and manage operations at an emergency response incident.

Incidental release

A release that can be safely controlled at the time of the release and does not have the potential to become an uncontrolled release.

Note:

Example of a situation that results in an incidental release:

A tanker truck is receiving a load of hazardous liquid when a leak occurs. The driver knows the only hazard from the liquid is minor skin irritation. The employer has trained the driver on procedures and provided equipment to use for a release of this quantity. The driver puts on skin protection and stops the leak. A spill kit is used to contain, absorb, and pick up the spilled material for disposal.

Immediately dangerous to life or health (IDLH)

Any atmospheric condition that would:

Cause an immediate threat to life

OR

Cause permanent or delayed adverse health effects

OR

Interfere with an employee's ability to escape

Limited action

Action necessary to:

Secure an operation during emergency responses,

OR

Prevent an incident from increasing in severity.

Examples include shutting down processes and closing emergency valves.

Lines of authority

A preestablished ranking of individuals, qualified to assume a commanding role during an emergency response, noted in an emergency response plan and implemented during a response. This is most important when responders from multiple employers could participate in an emergency response.

Lower explosive limit (LEL)

See lower flammable limit (LFL).

Lower flammable limit (LFL)

The lowest concentration of a material that will propagate a flame. The LFL is usually expressed as a percent (by volume) of the material in air (or other oxidant).

Must

Must means mandatory.

Permissible exposure limit (PEL)

Means the established time-weighted-average (TWA) concentration or ceiling concentration of a contaminant that must not be exceeded.

The exposure, inhalation, or dermal permissible limit specified in chapter 296-62 WAC, Part H, Air contaminants. **Personal protective equipment (PPE)**

Protective items designed to be worn by the user to protect them against airborne, skin contact and other hazards. This includes items such as respiratory protection, protective suits, gloves, eye protection, etc.

Postemergency response

The stage of the emergency response where the immediate threat from the release has been stabilized or eliminated, and cleanup of the site has started.

Published exposure level

Exposure limits published in *"National Institute for Occupational Safety and Health (NIOSH) Recommendations for Occupational Safety and Health"* (DHHS publication #92-100, 1992).

If an exposure limit is not published by NIOSH, then "published exposure level" means the exposure limits published by the American Conference of Governmental Industrial Hygienists (ACGIH) in *"TLVs and BEIs-Threshold Limit Values for Chemical Substances and Physical Agents"* (1999 edition).

Note: Additional exposure levels published by recognized organizations such as the American Industrial Hygiene Association are not required to be observed by this rule; however, they may be a useful resource when a hazardous substance is not covered by NIOSH and ACGIH publications.

Release

A spill, leak, or other type of hazardous substance discharge.

Uncontrolled release

A release where significant safety and health risks could be created. Releases of hazardous substances that are either incidental or could not create a safety or health hazard (i.e., fire, explosion or chemical exposure) are not considered to be uncontrolled releases.

Examples of conditions that could create a significant safety and health risk:

- Large-quantity releases
- Small releases that could be highly toxic
- Airborne exposures that could exceed a WISHA permissible exposure limit or a published exposure limit and employees are not adequately trained or equipped to control the release.

Example of an uncontrolled release:

A forklift driver knocks over a container of a solvent-based liquid, releasing the contents onto the warehouse floor. The driver has been trained to recognize the vapor is flammable and

moderately toxic when inhaled. The driver has not been trained or provided appropriate equipment to address this type of spill. In this situation, it is not safe for the driver to attempt a response. The driver needs to notify someone of the release so an emergency response can be initiated.

Workplace

A fixed facility

OR

A temporary location (such as a traffic corridor)

OR

Locations where employees respond to emergencies.